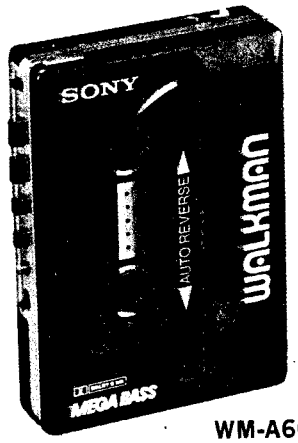
WM-A602/B602/AF604/BF604

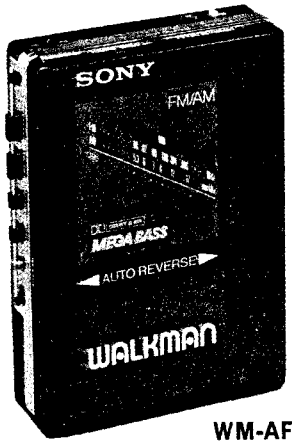
SERVICE MANUAL

US Model
Canadian Model
WM-A602/AF604

AEP Model
UK Model
E Model
WM-B602/BF604



WM-A602



WM-AF604

SPECIFICATION

Radio
(WM-AF604/BF604)

FM: 87.6 – 108MHz (US, Canadian)
FM: 87.5 – 108MHz (Italian)
FM: 87.6 – 107MHz (West Germany)
FM: 87.6 – 107.9MHz (AEP, UK, E)
AM: 530 – 1710kHz (US, Canadian)
AM: 531 – 1602kHz (AEP, UK, E, West Germany)
AM: 526.5 – 1606.5kHz (Italian)

Power requirements

1.5 V DC Battery size AA (R6) × 1
NC-5WM rechargeable battery
External DC 1.5 V power sources

Battery life
(Approximate hours)

	Playback	FM
Sony Alkaline AM3 (N)	7 hrs.	30 hrs.
Rechargeable NC-5WM	2 hrs.	8 hrs.

Accessories supplied

Stereo headphones (open-air type. 1) Beltclip (1)
Battery charger (1) Rechargeable battery (1)

Optional accessories*

Rechargeable battery NC-6WM, NC-5WM
Car battery cord DCC-70
Battery case EBP-500B

* Your dealer may not handle these optional accessories. Please ask the dealer for detailed information.

Design and specifications subject to change without notice.

Model Name Using Similar Mechanism	WM-150	
Tape Transport Mechanism Type	WM-A602 B602	MF-WMA602-01
	WM-AF604 BF604	MF-WMFAF604-01

Notes on battery

- Remove the battery when you will not use the unit for a long time to prevent damage from battery leakage and corrosion.
- The internal battery is disconnected when you plug a cord into DC IN 1.5V.
- When the sound becomes unstable, try a new battery.

Handling the rechargeable battery

- Recharge when the sound becomes noisy or distorted.

External power sources

The following external power sources can be connected through the DC IN 1.5 V jack.

- House current using an AC-D1M AC power adaptor
- 12 V car battery using a DCC-70 car battery cord
- Two size D (R20) batteries using an EBP-500B battery case

The illustration shows the polarity of DC IN 1.5 V jack. Use only a power cord having the same polarity.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

CASSETTE PLAYER

WM-A602/B602

FM/AM STEREO CASSETTE PLAYER

WM-AF604/BF604

SONY

MICROFILM

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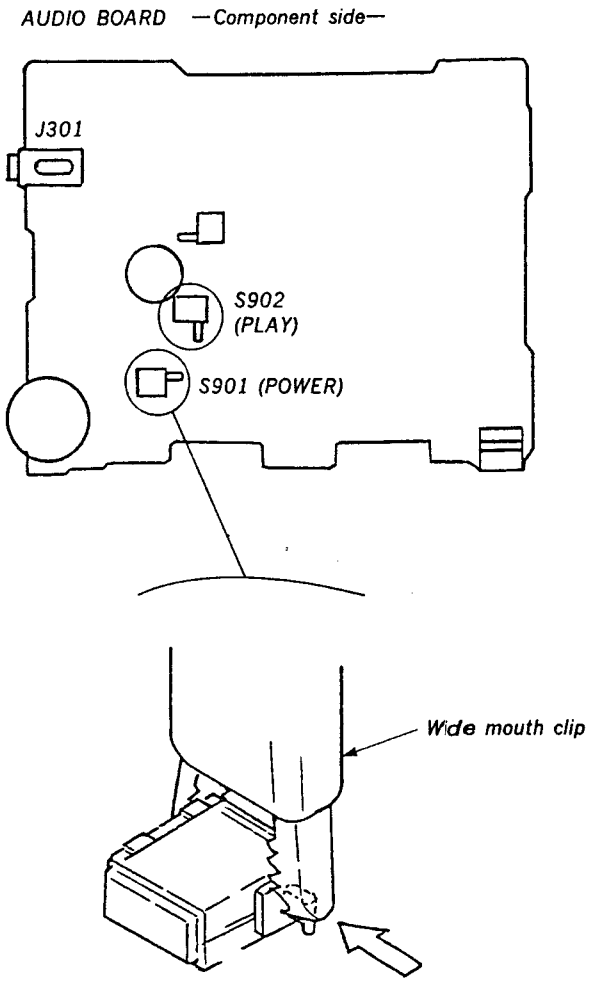
SERVICING NOTES

When you are movement check states of removed the audio board, press the PLAY (▶) button, slide on the S901 (POWER) and S902 (PLAY) switches.



Flexible Circuit Board Repairing

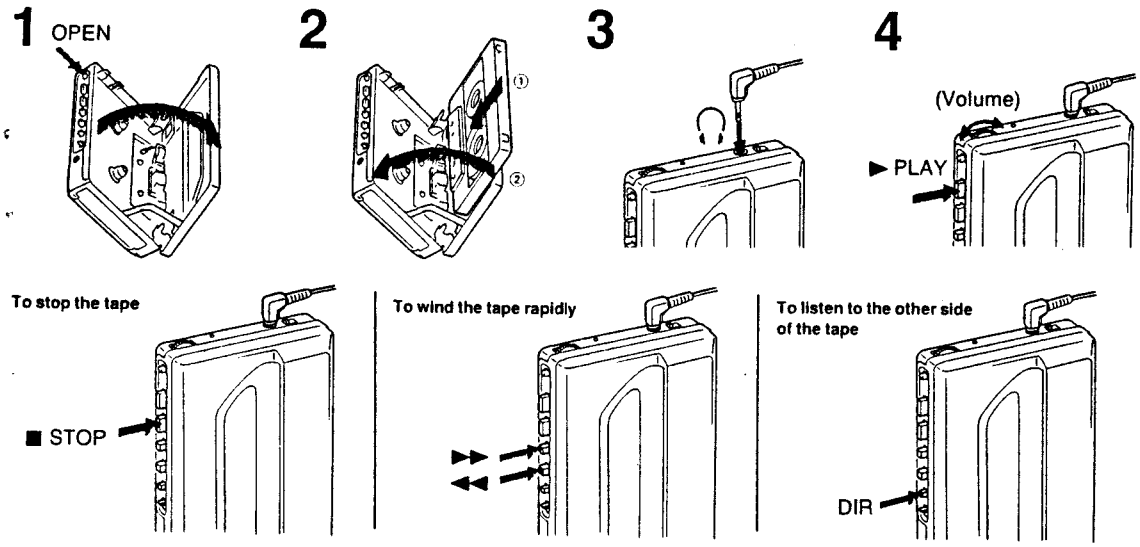
- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (Within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 1
GENERAL

1-1. TAPE PLAYBACK



MEGA BASS

Listening to powerful and heavy sound

Set to the desired position **Bass is boosted in the order of NORM, MID and MAX.**	NORM MID MAX

DOLBY NR

Getting the best performance from your tape

For Dolby NR processed tapes	DOLBY NR ON

MODE

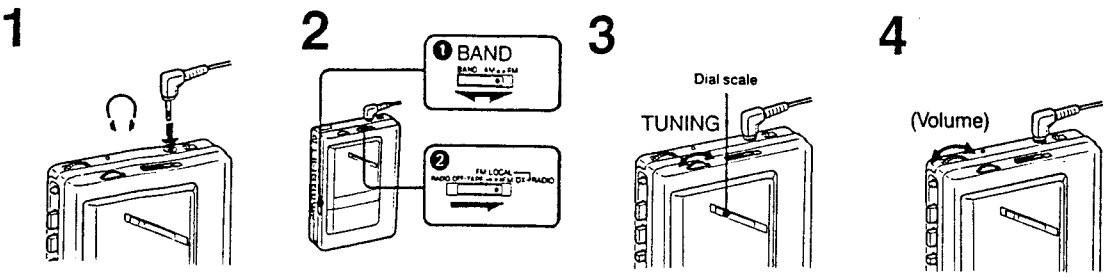
On playback operation

Playing back both sides of the cassette once When the playback starts from the reverse side of the cassette, the unit will be shut off at the end of that side.	MODE
Playing back both sides of the cassette repeatedly	MODE

TAPE

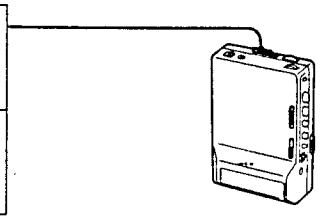
For normal (TYPE I) tapes	TAPE NORM
For CrO_2 (TYPE II) or metal (TYPE IV) tapes	TAPE CO-METAL

1-2. RADIO RECEPTION (WM-AF604/BF604)



To improve FM sensitivity

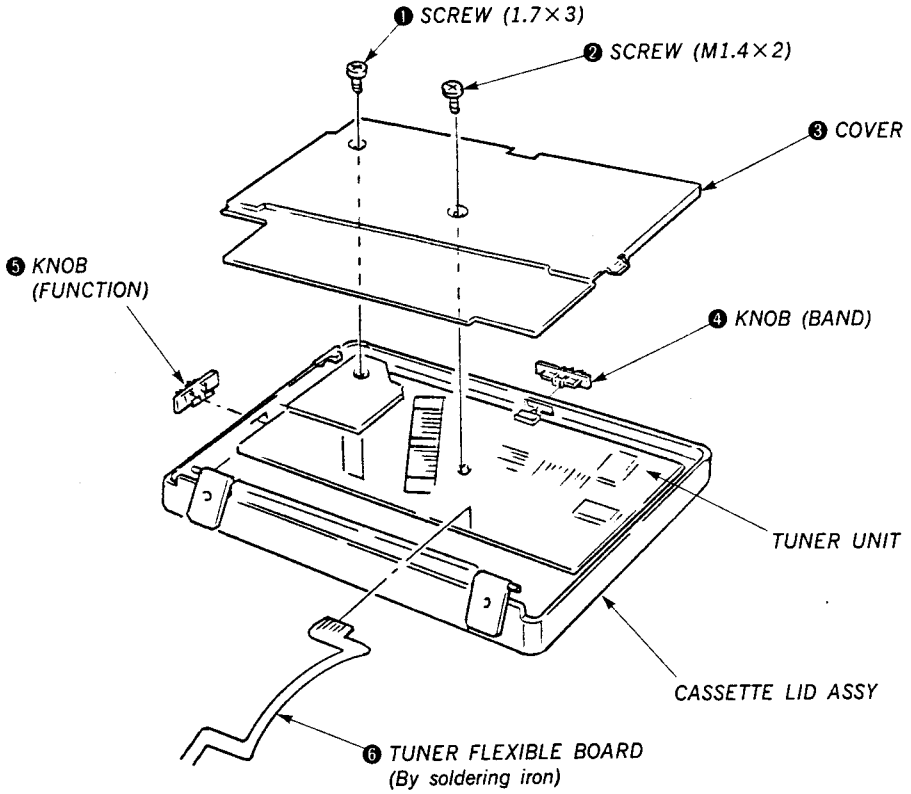
For normal reception Set to FM DX.	FM DX
If a very strong station signal causes noise. The noise will be reduced. Set to FM LOCAL.	FM LOCAL



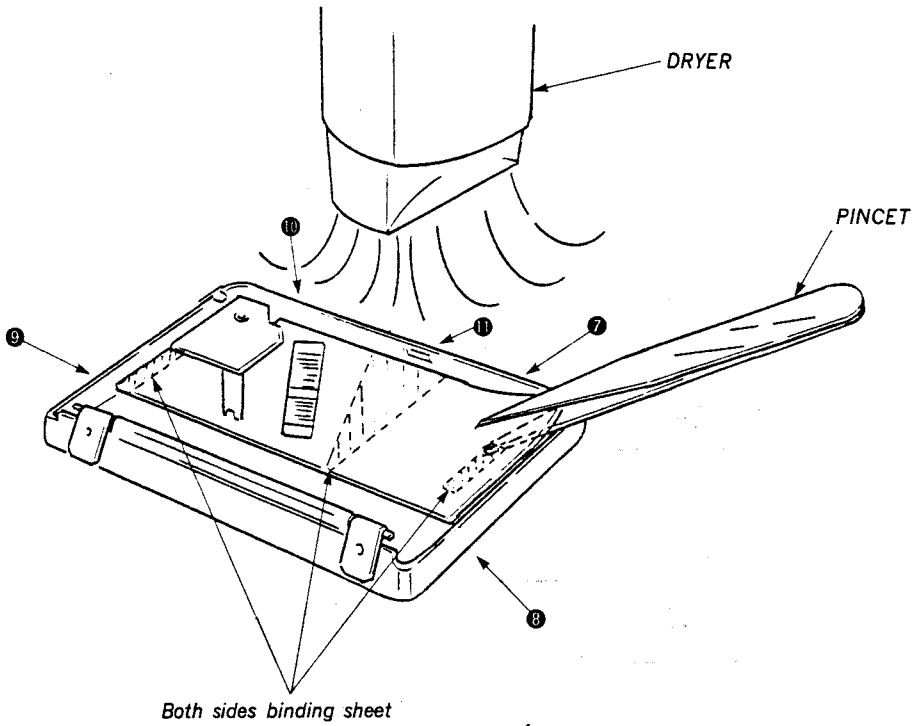
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure the numerical order given.

2-1. TUNER UNIT REMOVAL (WM-AF604/BF604)



In order of ❼ to ⓫ with wam up by dryer slowly insert a pinset.



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL MEASUREMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

   playback head — pinch roller
   capstan — rubber belts

2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the reted power supply voltage (1.3V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	20-38g•cm (0.27-0.52oz•inch)
FWD Back Tension		0.5-4g•cm (0.007-0.05oz•inch)
REV	CQ-102RB	20-38g•cm (0.27-0.52oz•inch)
REV Back Tension		0.5-3.5g•cm (0.007-0.05oz•inch)
FF, REW	CQ-201B	more than 60 g·cm (more than 0.83 oz·inch)

Tape Tension Measurement

Mode	Torque meter	Meter reading
FWD	CQ-403A	more than 40 g·cm (more than 0.54 oz·inch)
REV	CQ-403R	

3-2. ELECTRICAL ADJUSTMENTS

Playback Head Azimuth Check

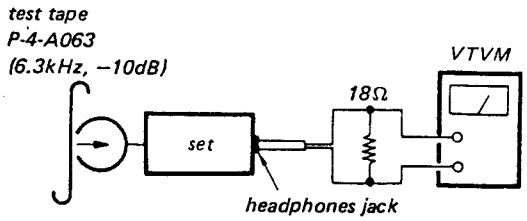
- **Perform this check both in FWD and REV mode.**

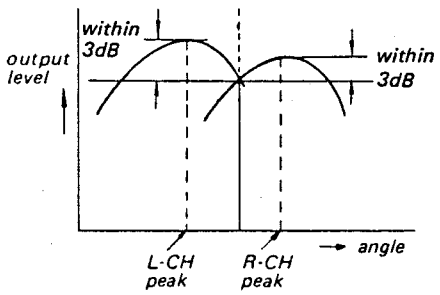
Note: This set is not featured the head azimuth adjustment. When replacing the head, check the both L-ch and R-ch output levels and also those phases.

Procedure:

1. Level Check

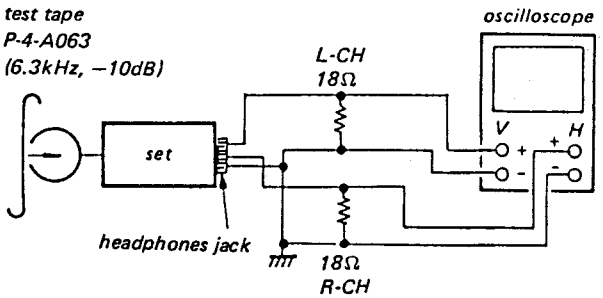
   Mode: playback

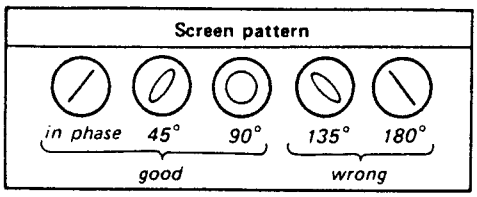




2. Phase Check

   Mode: playback

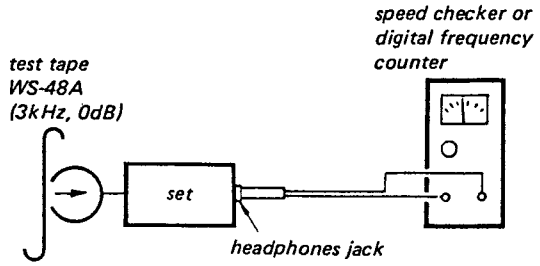




Tape Speed Adjustment

Procedure:

Mode: playback

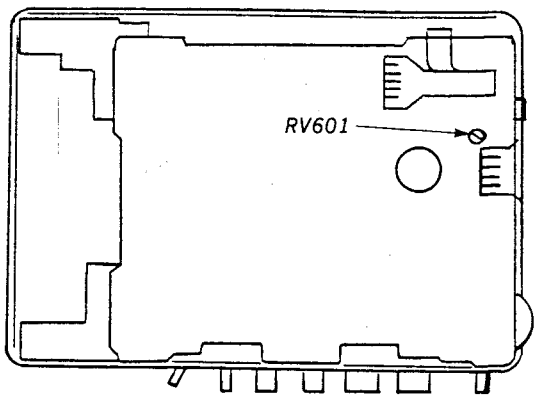


Adjustment value :

speed checker	digital frequency counter
±1.0%	2,970-3,030Hz

Frequency difference between the beginning and the end of the tape should be within ± 2.5% (±75Hz).

Adjustment Location:

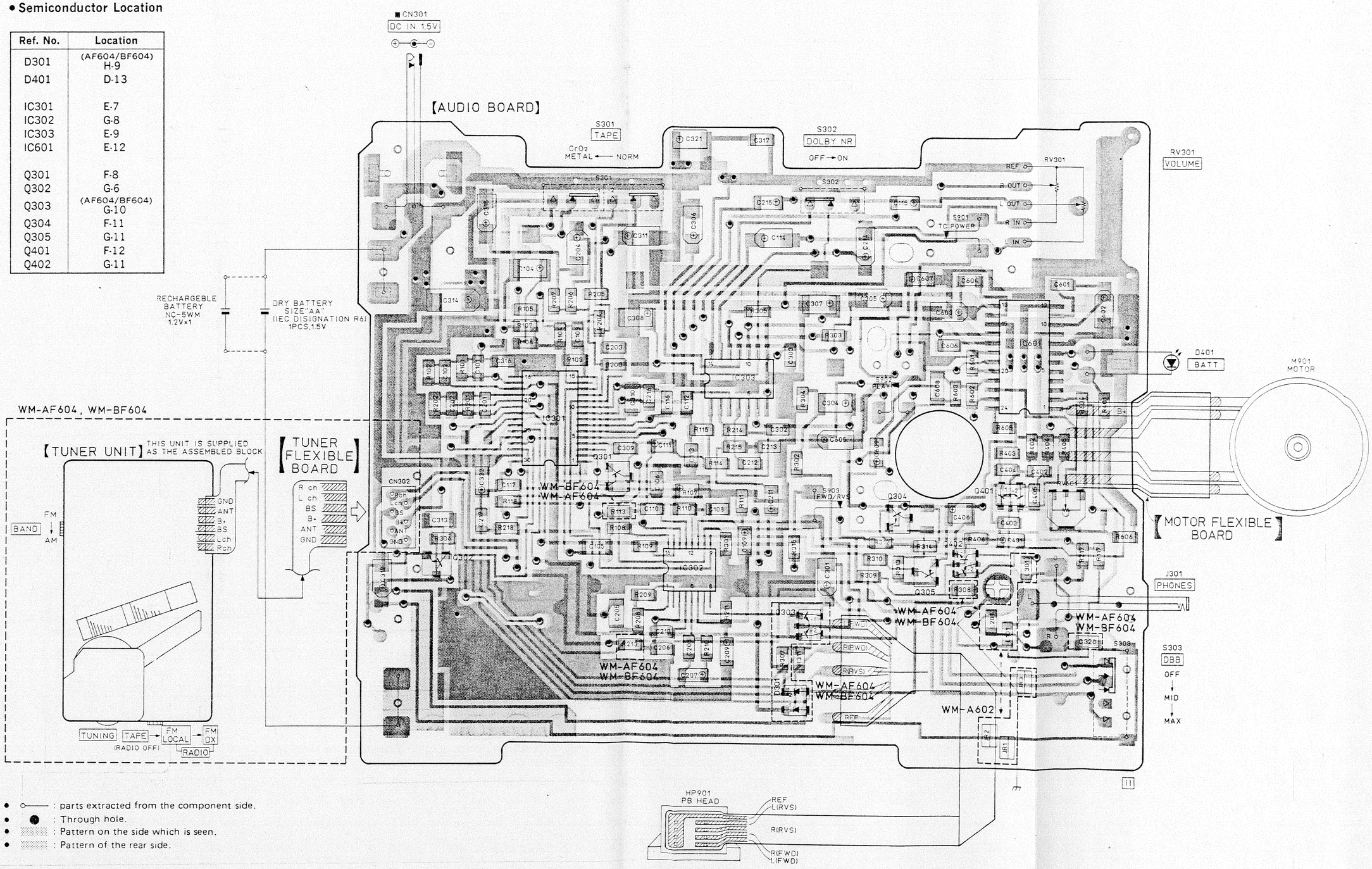


SECTION 4
DIAGRAMS

4-1. PRINTED WIRING BOARD

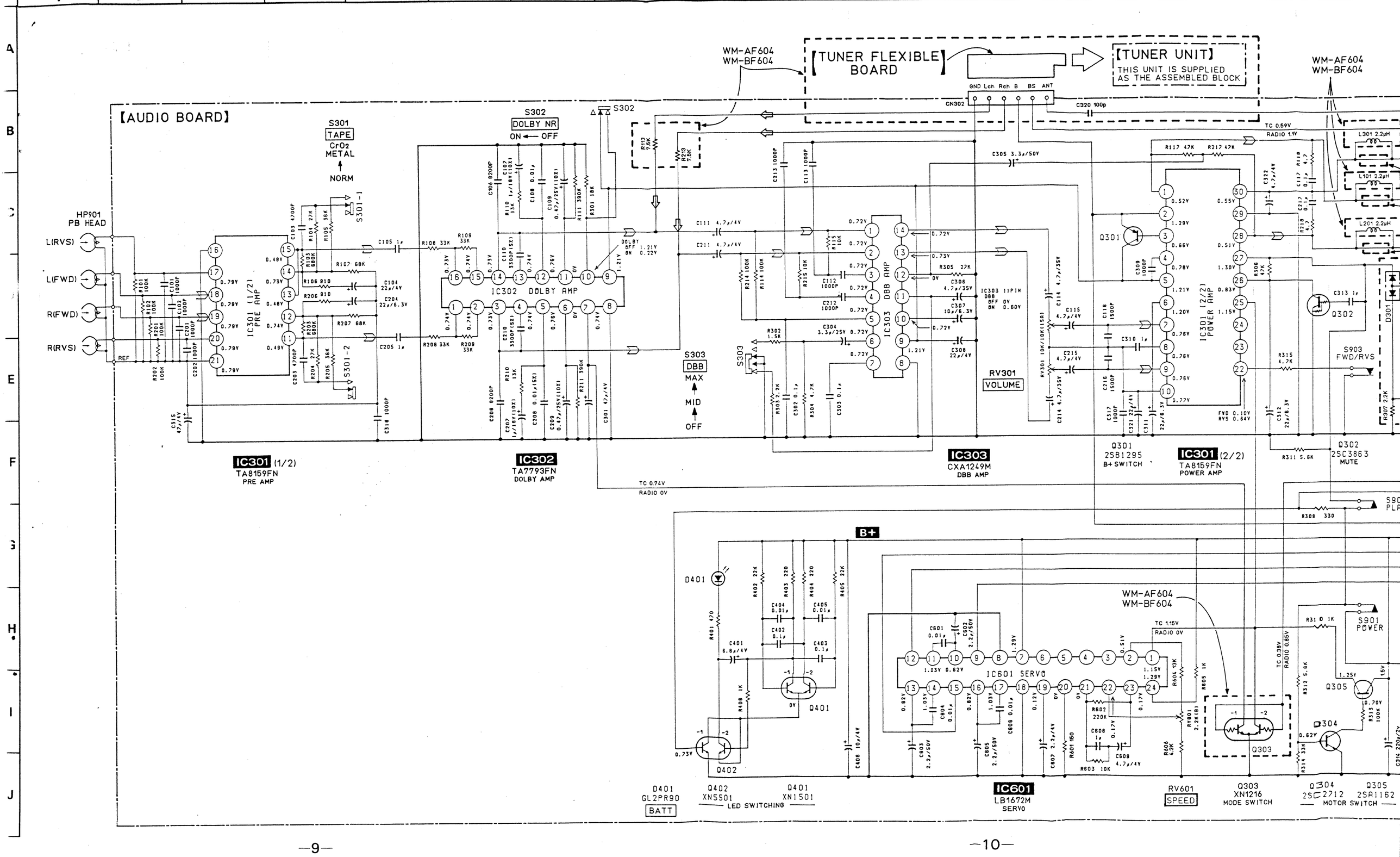
• **Semiconductor Location**

Ref. No.	Location
D301	(AF604/BF604) H-9
D401	D-13
IC301	E-7
IC302	G-8
IC303	E-9
IC601	E-12
Q301	F-8
Q302	G-6
Q303	(AF604/BF604) G-10
Q304	F-11
Q305	G-11
Q401	F-12
Q402	G-11



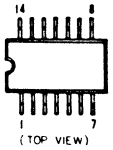
• ○—— : parts extracted from the component side.
• ● : Through hole.
• ▨ : Pattern on the side which is seen.
• ▨ : Pattern of the rear side.

4-2. SCHEMATIC DIAGRAM • Refer to page 12 for IC Block Diagrams.

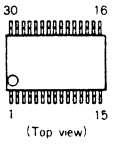


• SEMICONDUCTOR LEAD LAYOUTS

CXA1249M

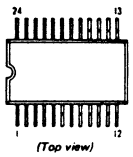


TA8159FN

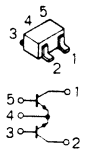


2SA1162
2SB1295-UL6
2SC2712G
2SC3863

LB1672M

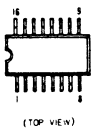


XN1216

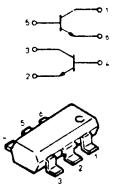


MA713

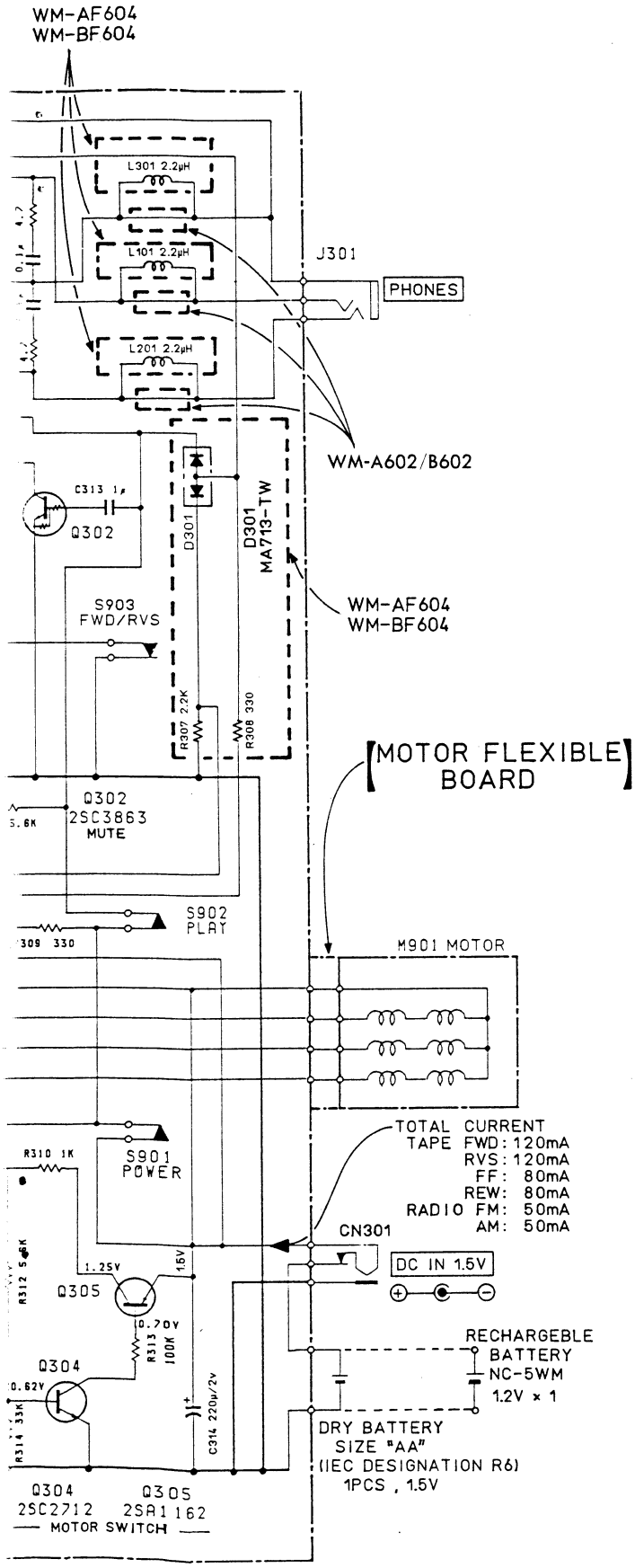
TA7793FN-ER



XN5501



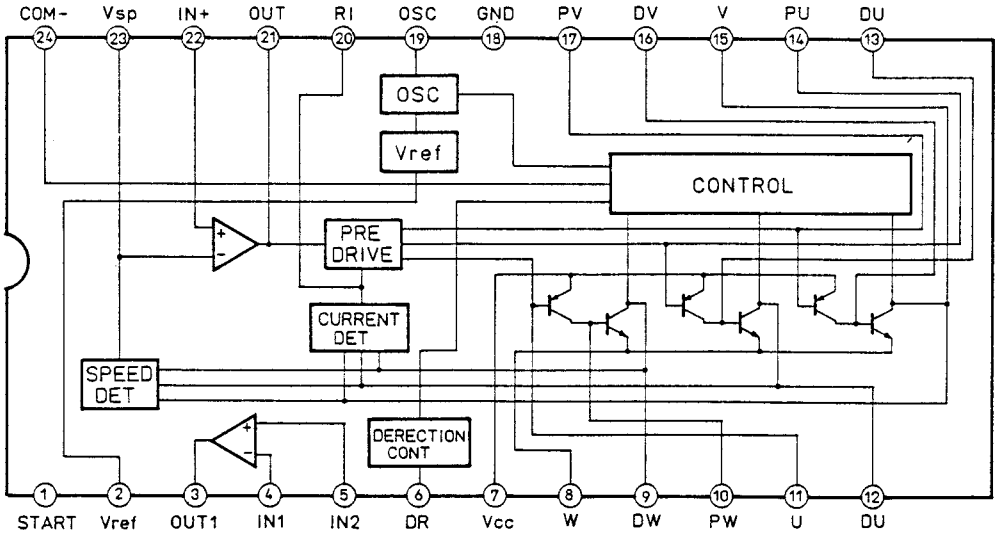
GL2PR90



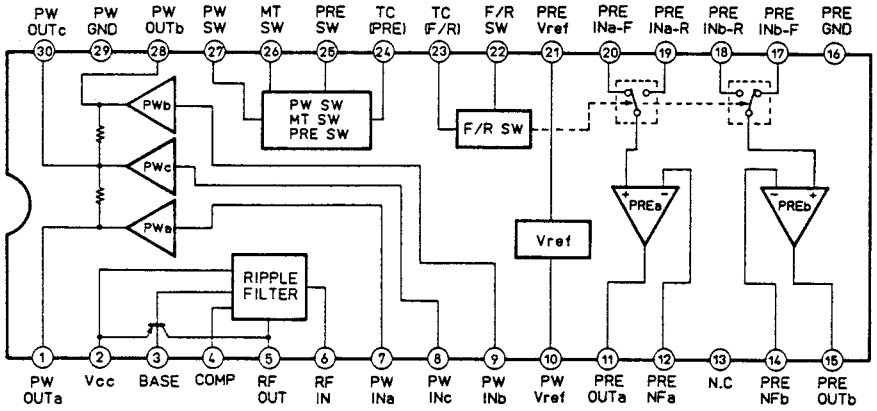
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/8W or less unless otherwise specified.
- ▭ : adjustment for repair.
- Power voltage is dc 1.3V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FWD
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : PB

4-3. IC BLOCK DIAGRAMS

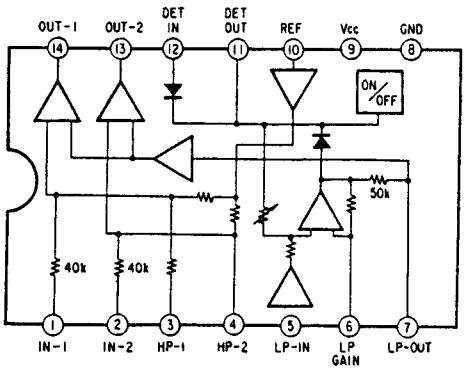
LB1672


COM- Vsp IN+ OUT RI OSC GND PV DV V PU DU
24 23 22 21 20 19 18 17 16 15 14 13
OSC
Vref
CONTROL
PRE DRIVE
CURRENT DET
SPEED DET
DERECTION CONT
1 2 3 4 5 6 7 8 9 10 11 12
START Vref OUT1 IN1 IN2 DR Vcc W DW PW U DU

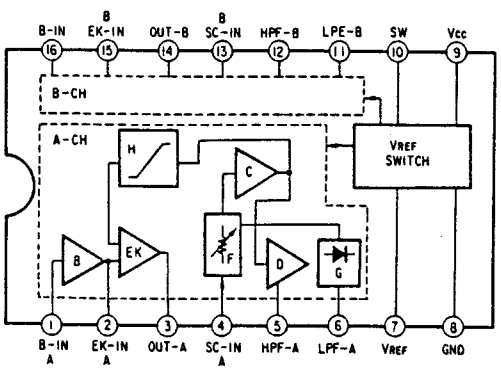
TA-8159FN


PW OUTc PW GND PW OUTb PW SW MT SW PRE SW TC (PRE) TC (F/R) F/R SW PRE Vref PRE INa-F PRE INa-R PRE INb-R PRE INb-F PRE GND
30 29 28 27 26 25 24 23 22 21 20 19 18 17 16
PWb
PWc
PWa
PW SW
MT SW
PRE SW
F/R SW
Vref
PREa
PREb
RIPPLE FILTER
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
PW OUTa Vcc BASE COMP RF OUT RF IN PW INa PW INc PW INb PW Vref PRE OUTa PRE NFa N.C PRE NFb PRE OUTb

CXA-1249M



TA7793F

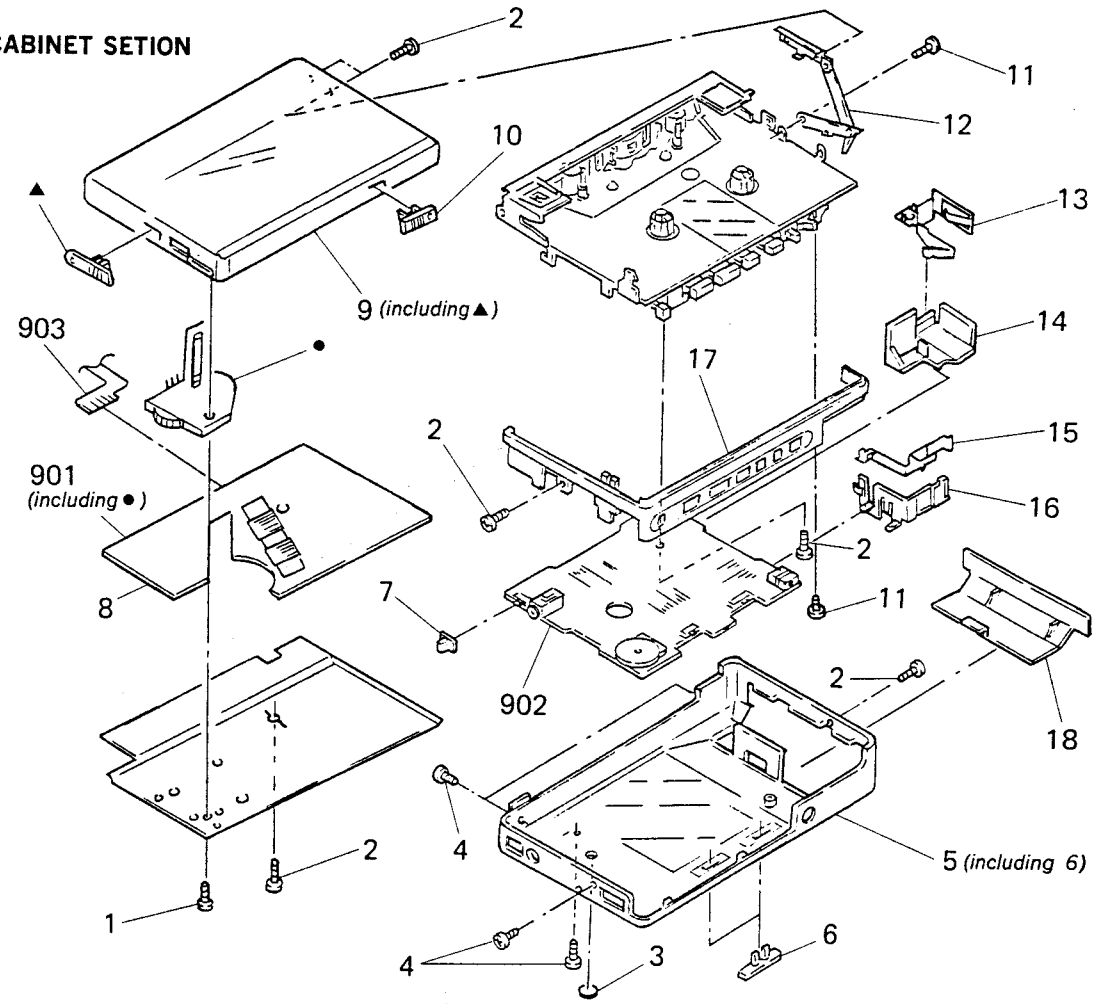


SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

5-1. CABINET SETION

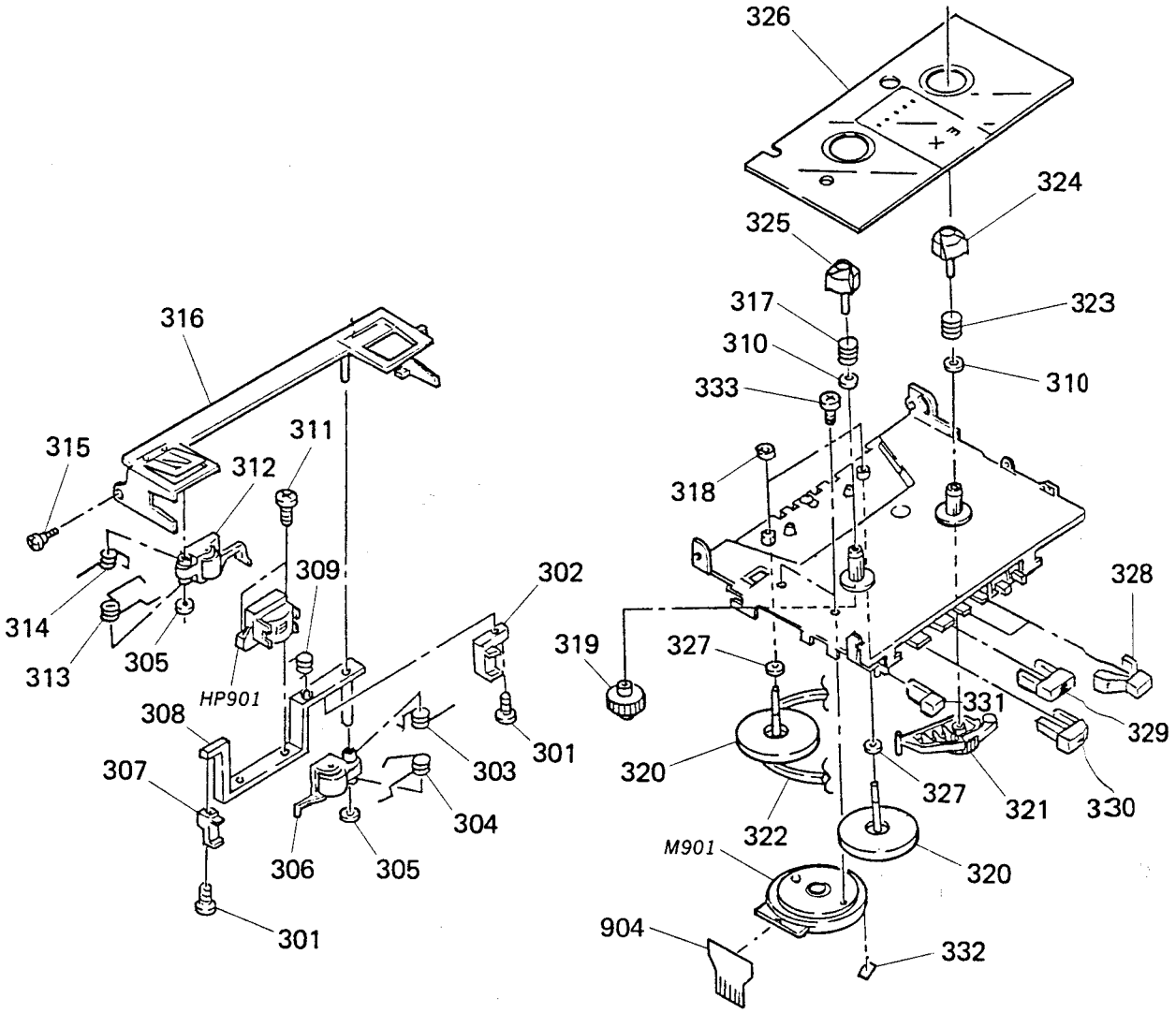


No.	Part No.	Description	Remarks
1	3-318-382-21	SCREW (1.7X3), TAPPING	
2	3-704-197-11	SCREW (M1.4X2.0), LOCKING	
3	3-342-380-01	SHEET, SPEED HOLE	
4	3-704-197-31	SCREW (M1.4X3.0), LOCKING	
5	X-3352-015-1	(A602/B602)...CABINET (REAR) ASSY	
	X-3352-017-1	(AF604/BF604:AEP,UK,E,WG)	
		....CABINET (REAR) ASSY	
	X-3352-022-1	(BF604:IT)....CABINET (REAR) ASSY	
6	3-352-045-01	KNOB (TAPE)	
7	3-348-186-01	KNOB (DBB)	
8	*3-352-061-01	COVER	
9	X-3352-014-1	(A602/B602).....LID (TC-1)ASSY, CASSETTE	
	X-3352-018-1	(AF604).....LID (CF-1)ASSY, CASSETTE	
	X-3352-020-1	(BF604:AEP,UK,E)	
		...LID (CF-1)ASSY, CASSETTE	
	X-3352-021-1	(BF604:IT,WG)...LID (CF-1)ASSY, CASSETTE	

No.	Part No.	Description	Remarks
10	3-352-055-01	KNOB (BAND)	
11	3-704-197-01	SCREW (M1.4X1.6), LOCKING	
12	X-3352-013-1	ARM ASSY, CLICK	
13	3-352-048-01	TERMINAL BOARD, MINUS	
14	3-352-050-01	HOLDER (B), TERMINAL	
15	3-352-047-01	TERMINAL BOARD, PLUS	
16	3-352-049-01	HOLDER (A), TERMINAL	
17	3-352-053-01	ORNAMENT, BUTTON	
18	3-352-046-01	LID, BATTERY CASE	
901	1-465-150-11	(AF604).....TUNER UNIT	
	1-465-151-11	(BF604:AEP,UK,E)...TUNER UNIT	
	1-465-152-11	(BF604:WG).....TUNER UNIT	
	1-465-153-11	(BF604:IT).....TUNER UNIT	
902	A-3070-259-A	(AF604/BF604)...MOUNTED PCB, AUDIO	
	A-3270-602-A	(A602/B602).....MOUNTED PCB, AUDIO	
903	1-630-708-11	(AF604/BF604)...PC BOARD, FLEXIBLE (TUNER)	

5-2. MECHANISM SECTION (1)

(WM-A602/B602 : MF-WMA602-01
WM-AF604/BF604 : MF-WMFAF604-01)

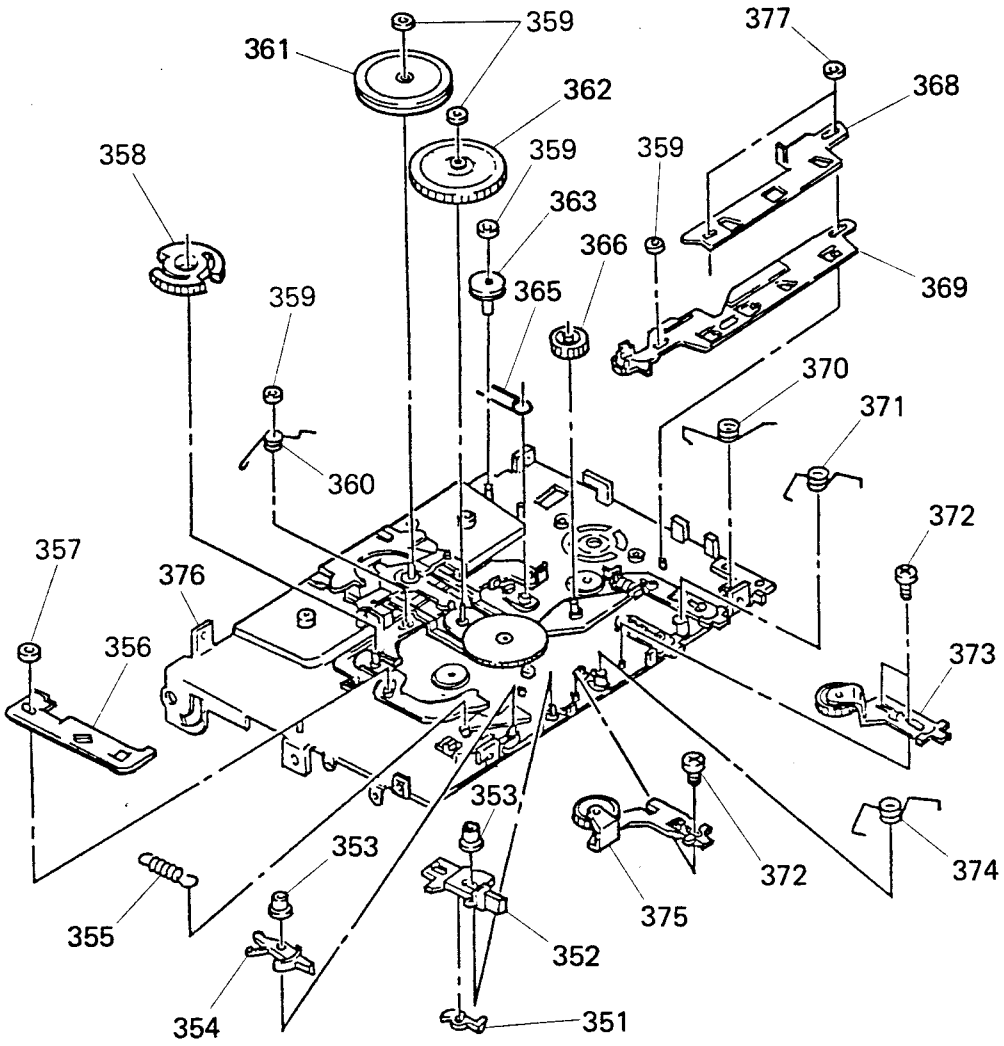


No.	Part No.	Description	Remarks
301	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
302	*3-344-693-01	GUIDE (LEFT)	
303	3-341-468-01	SPRING (R)	
304	3-352-082-01	SPRING (PINCH RX), TORSION	
305	3-341-473-01	WASHER (MP)	
306	X-3331-035-1	PINCH LEVER (R) ASSY	
307	*3-344-694-01	GUIDE (RIGHT)	
308	*3-345-725-01	LEVER (AZ), HEAD	
309	3-347-205-01	SPRING (HD LEVER), TORSION	
310	3-348-990-11	WASHER	
311	3-348-998-71	SCREW (M1.4X4.5), TAPPING, PAN	
312	X-3331-036-1	PINCH LEVER (N) ASSY	
313	3-352-081-01	SPRING (PINCH NX), TORSION	
314	3-341-469-01	SPRING (N)	
315	3-352-005-01	SCREW (M1.4), PRECISION STEP	
316	X-3352-009-1	(A602/B602).....HOLDER (TX) ASSY	
	X-3352-010-1	(AF604/BF604)...HOLDER (TX) ASSY	

No.	Part No.	Description	Remarks
317	3-348-989-01	SPRING, COMPRESSION	
318	3-331-007-21	WASHER	
319	3-348-151-01	GEAR (TAKE-UP REEL)	
320	X-3352-007-1	WHEEL (R.X) ASSY, CAPSTAN	
321	X-3348-110-1	LEVER ASSY, PICK UP	
322	3-352-022-01	BELT	
323	3-348-107-01	SPRING, COMPRESSION	
324	3-348-149-01	REEL, SUPPLY	
325	3-348-150-01	REEL, TAKE-UP	
326	3-352-010-01	COVER (X), MD	
327	3-321-394-21	WASHER	
328	3-352-025-01	BUTTON (FR.X)	
329	3-352-024-01	BUTTON (STOP.X)	
330	3-352-023-01	BUTTON (PLAY.X)	
331	3-348-129-01	BUTTON (OPEN)	
332	3-703-929-01	SPACER (P)	
333	3-349-825-01	SCREW	
904	1-629-873-11	PC BOARD, MOTOR FLEXIBLE	
HP901	1-543-605-11	HEAD, MAGNETIC (PLAYBACK)	
M901	1-541-660-11	MOTOR	

5-3. MECHANISM SECTION (2)

(WM-A602/B602 : MF-WMA602-01
WM-AF604/BF604 : MF-WMFAF604-01)



No.	Part No.	Description	Remarks
351	3-348-101-01	RATCHET	
352	3-348-156-01	LEVER, DIR	
353	3-348-102-01	BUSHING	
354	3-348-105-01	LEVER, MODE SELECTION	
355	3-348-163-01	SPRING, TENSION	
356	*3-352-002-01	LEVER (X), TRIGGER	
357	3-348-953-11	WASHER	
358	3-352-032-01	GEAR (X), CAM	
359	3-348-996-01	WASHER	
360	3-348-172-01	SPRING (S.OFF), TORSION	
361	3-352-007-01	PULLEY (MIDWAY.X)	
362	X-3352-006-1	CLUTCH (X) ASSY	
363	3-352-008-01	PULLEY (REVERSE.X)	

No.	Part No.	Description	Remarks
365	3-348-159-01	SPRING (NR), TORSION	
366	3-352-021-01	GEAR (N.X)	
368	*3-352-028-01	LEVER (X), SW	
369	X-3348-102-1	LEVER ASSY, LOCK	
370	3-348-162-01	SPRING (LOCK), TORSION	
371	3-348-103-01	SPRING (PLAY), TORSION	
372	3-348-160-01	SCREW (M1.4X1.3),PRECISION PAN	
373	X-3352-004-1	LEVER (X) ASSY, FF	
374	3-348-168-01	SPRING (FR), TORSION	
375	X-3352-005-1	LEVER (X) ASSY, REW	
376	X-3352-011-1	CHASSIS (X) COMPLETE ASSY	
377	3-348-953-21	WASHER	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description		
901	1-465-150-11	(AF604).....TUNER UNIT		
	1-465-151-11	(BF604:AEP,UK,E)...TUNER UNIT		
	1-465-152-11	(BF604:WG).....TUNER UNIT		
	1-465-153-11	(BF604:IT).....TUNER UNIT		
902	A-3070-259-A	(AF604/BF604)...MOUNTED PCB, AUDIO		
	A-3270-602-A	(A602/B602).....MOUNTED PCB, AUDIO		
903	1-630-708-11	(AF604/BF604) ...PC BOARD, FLEXIBLE (TUNER)		
904	1-629-873-11	PC BOARD, MOTOR FLEXIBLE		
C101	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C102	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C103	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V
C104	1-126-590-11	ELECT 22MF	20%	4V
C105	1-162-638-11	CERAMIC CHIP 1MF		16V
C106	1-163-020-00	CERAMIC CHIP 0.0082MF	5%	50V
C107	1-135-199-21	TANTAL. CHIP 1MF	10%	16V
C108	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V
C109	1-135-195-21	TANTAL. CHIP 0.47MF	10%	25V
C110	1-163-015-00	CERAMIC CHIP 0.0033MF	5%	50V
C111	1-135-183-11	TANTAL. CHIP 4.7MF	20%	4V
C112	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C113	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C114	1-126-603-11	ELECT 4.7MF	20%	35V
C115	1-135-183-11	TANTAL. CHIP 4.7MF	20%	4V
C116	1-163-145-00	CERAMIC CHIP 0.0015MF	10%	50V
C117	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C201	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C202	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C203	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V
C204	1-126-605-11	ELECT 22MF	20%	6.3V
C205	1-162-638-11	CERAMIC CHIP 1MF		16V
C206	1-163-020-00	CERAMIC CHIP 0.0082MF	5%	50V
C207	1-135-199-21	TANTAL. CHIP 1MF	10%	16V
C208	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V
C209	1-135-195-21	TANTAL. CHIP 0.47MF	10%	25V
C210	1-163-015-00	CERAMIC CHIP 0.0033MF	5%	50V
C211	1-135-183-11	TANTAL. CHIP 4.7MF	20%	4V
C212	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C213	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C214	1-126-603-11	ELECT 4.7MF	20%	35V
C215	1-135-183-11	TANTAL. CHIP 4.7MF	20%	4V
C216	1-163-145-00	CERAMIC CHIP 0.0015MF	10%	50V
C217	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C301	1-126-607-11	ELECT 47MF	20%	4V
C302	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C303	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C304	1-126-609-11	ELECT 3.3MF	20%	25V
C305	1-126-602-11	ELECT 3.3MF	20%	50V
C306	1-126-603-11	ELECT 4.7MF	20%	35V
C307	1-126-591-11	ELECT 10MF	20%	6.3V
C308	1-126-590-11	ELECT 22MF	20%	4V
C309	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C310	1-162-638-11	CERAMIC CHIP 1MF		16V
C311	1-126-605-11	ELECT 22MF	20%	6.3V
C312	1-126-605-11	ELECT 22MF	20%	6.3V
C313	1-162-638-11	CERAMIC CHIP 1MF		16V
C314	1-126-608-11	ELECT 220MF	20%	2V
C315	1-126-607-11	ELECT 47MF	20%	4V
C316	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C317	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C320	1-163-117-00	(AF604/BF604) ...CERAMIC CHIP 100PF	10%	50V
C321	1-126-590-11	ELECT 22MF	20%	4V
C322	1-135-183-11	TANTAL. CHIP 4.7MF	20%	4V
C401	1-135-184-11	TANTAL. CHIP 6.8MF	20%	4V
C402	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C403	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C404	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C405	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C406	1-135-185-11	TANTAL. CHIP 10MF	20%	4V
C601	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C602	1-126-601-11	ELECT 2.2MF	20%	50V
C603	1-126-601-11	ELECT 2.2MF	20%	50V
C604	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C605	1-126-601-11	ELECT 2.2MF	20%	50V
C606	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C607	1-135-149-21	TANTAL. CHIP 2.2MF	10%	4V
C608	1-162-638-11	CERAMIC CHIP 1MF		16V
C609	1-135-183-11	TANTAL. CHIP 4.7MF	20%	4V
CN301	1-568-255-11	JACK, EXTERNAL POWER 1P (DC IN 1.5V)		
CN302	1-568-253-11	(AF604/BF604)...HOUSING, CONNECTOR 7P		
D301	8-719-404-16	(AF604/BF604)...DIODE MA713		
D401	8-719-976-16	DIODE GL2PR90		
HP901	1-543-605-11	HEAD, MAGNETIC (PLAYBACK)		
IC301	8-759-231-86	IC TA8159FN		
IC302	8-759-230-90	IC TA7793FN		
IC303	8-759-805-09	IC CXA1249M		
IC601	8-759-821-20	IC LB1672M		
J301	1-568-254-11	JACK 1P (PHONES)		

Ref.No.	Part No.	Description
JR1	1-216-295-00	(A602/B602)...METAL GLAZE 0 5% 1/10W
JR2	1-216-295-00	(A602/B602)...METAL GLAZE 0 5% 1/10W
JR3	1-216-295-00	(A602/B602)...METAL GLAZE 0 5% 1/10W
L101	1-410-997-31	(AF604/BF604)...INDUCTOR CHIP 2.2UH
L201	1-410-997-31	(AF604/BF604)...INDUCTOR CHIP 2.2UH
L301	1-410-997-31	(AF604/BF604)...INDUCTOR CHIP 2.2UH
M901	1-541-660-11	MOTOR
Q301	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q302	8-729-805-38	TRANSISTOR 2SC3863
Q303	8-729-421-23	(AF604/BF604)...TRANSISTOR XN1216
Q304	8-729-271-22	TRANSISTOR 2SC2712G
Q305	8-729-216-22	TRANSISTOR 2SA1162
Q401	8-729-421-23	TRANSISTOR XN1216
Q402	8-729-402-75	TRANSISTOR XN5501
R101	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R102	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R103	1-216-117-00	METAL GLAZE 680K 5% 1/10W
R104	1-216-083-00	METAL GLAZE 27K 5% 1/10W
R105	1-216-086-00	METAL GLAZE 36K 5% 1/10W
R106	1-216-048-00	METAL GLAZE 910 5% 1/10W
R107	1-216-093-00	METAL GLAZE 68K 5% 1/10W
R108	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R109	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R110	1-216-076-00	METAL GLAZE 13K 5% 1/10W
R111	1-216-111-00	METAL GLAZE 390K 5% 1/10W
R113	1-216-070-00	(AF604/BF604) ...METAL GLAZE 7.5K 5% 1/10W
R114	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R115	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R117	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R118	1-216-308-00	METAL GLAZE 4.7 5% 1/10W
R201	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R202	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R203	1-216-117-00	METAL GLAZE 680K 5% 1/10W
R204	1-216-083-00	METAL GLAZE 27K 5% 1/10W
R205	1-216-086-00	METAL GLAZE 36K 5% 1/10W
R206	1-216-048-00	METAL GLAZE 910 5% 1/10W
R207	1-216-093-00	METAL GLAZE 68K 5% 1/10W
R208	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R209	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R210	1-216-076-00	METAL GLAZE 13K 5% 1/10W
R211	1-216-111-00	METAL GLAZE 390K 5% 1/10W
R213	1-216-070-00	(AF604/BF604) ...METAL GLAZE 7.5K 5% 1/10W
R214	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R215	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R217	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R218	1-216-308-00	METAL GLAZE 4.7 5% 1/10W
R301	1-216-079-00	METAL GLAZE 18K 5% 1/10W
R302	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R303	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R304	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R305	1-216-083-00	METAL GLAZE 27K 5% 1/10W
R306	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R307	1-216-057-00	(AF604/BF604) ...METAL GLAZE 2.2K 5% 1/10W
R308	1-216-037-00	(AF604/BF604) ...METAL GLAZE 330 5% 1/10W
R309	1-216-037-00	METAL GLAZE 330 5% 1/10W
R310	1-216-049-00	METAL GLAZE 1K 5% 1/10W

Ref.No.	Part No.	Description
R311	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W
R312	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W
R313	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R314	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R315	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R401	1-216-041-00	METAL GLAZE 470 5% 1/10W
R402	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R403	1-216-033-00	METAL GLAZE 220 5% 1/10W
R404	1-216-033-00	METAL GLAZE 220 5% 1/10W
R405	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R406	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R601	1-216-029-00	METAL GLAZE 150 5% 1/10W
R602	1-216-105-00	METAL GLAZE 220K 5% 1/10W
R603	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R604	1-216-076-00	METAL GLAZE 13K 5% 1/10W
R605	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R606	1-216-064-00	METAL GLAZE 4.3K 5% 1/10W
RV301	1-238-488-11	RES, VAR, CARBON 10K/10K (VOLUME)
RV601	1-238-202-11	RES, ADJ, METAL GLAZE 2.2K (SPEED)
S301	1-571-277-11	SWITCH, SLIDE (TAPE)
S302	1-571-275-11	SWITCH, SLIDE (DOLBY NR)
S303	1-571-506-11	SWITCH, SLIDE (DBB)
S901	1-571-585-11	SWITCH, PUSH (1 KEY)(POWER)
S902	1-571-585-11	SWITCH, PUSH (1 KEY)(PLAY)
S903	1-571-585-11	SWITCH, PUSH (1 KEY)(FWD/RVS)

ACCESSORY & PACKING MATERIAL

⚠	1-528-224-11	(AF604:Canadian)..BATTERY CHARGER (BC-7F)
	1-528-176-11	(A602/AF604)....BATTERY, STORAGE (NC-5WM)
⚠	1-528-221-21	(A602/AF604:US)...BATTERY CHARGER (BC-7F)
	3-347-262-01	(AF604:Canadian)...CASE, CARRYING
*	3-352-066-01	(A602).....CUSHION (UPPER)
*	3-352-067-01	(A602/AF604)...CUSHION (LOWER)
*	3-352-070-01	(AF604).....CUSHION (UPPER)
*	3-352-091-01	(B602).....CUSHION (UPPER)
*	3-352-092-01	(BF604/B602)...CUSHION (LOWER)
*	3-352-096-01	(BF604).....CUSHION (UPPER)
*	3-352-068-01	(A602).....INDIVIDUAL CARTON
*	3-352-071-01	(AF604).....INDIVIDUAL CARTON
*	3-352-074-01	(B602:AEP,UK).....INDIVIDUAL CARTON
*	3-352-076-01	(BF604:AEP,UK,WG,IT)...INDIVIDUAL CARTON
*	3-352-093-01	(B602:E).....INDIVIDUAL CARTON
*	3-352-097-01	(BF604:E).....INDIVIDUAL CARTON
	3-750-105-11	(B602).....MANUAL, INSTRUCTION
	3-750-105-21	(A602).....MANUAL, INSTRUCTION
	3-750-105-41	(B602:AEP).....MANUAL, INSTRUCTION
	3-750-110-11	(AF604:Canadian/BF604) ...MANUAL, INSTRUCTION
	3-750-110-21	(AF604:US).....MANUAL, INSTRUCTION
	3-750-110-41	(BF604:AEP,WG,IT)...MANUAL, INSTRUCTION
	8-952-260-92	(A602/AF604/BF604:AEP,UK,WG,IT/ B602:AEP,UK)....MDR-W10L/1 SET
	8-952-350-90	(B602/BF604:E)....EARPHONE MDR-E454 SET
	X-3352-016-1	CLIP ASSY, BELT

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.